

REMARKS

In the Office Action, the Examiner rejected claims 1, 2, 8, and 9 under 35 U.S.C. §102(b) as being anticipated by either the Ljung patent or the vonBieren patent.

The Ljung patent discloses a prior art ring laser gyro in Figure 1 that includes a triangular body with a tubular cavity forming a continuous path for lasing. Gas in the tubular cavity is caused to be ionized by the cathode and anodes. A photodetector at one corner of the ring laser gyro provides an output to a decoder. A dither is impressed upon the ring laser gyro by a torsional spring about the central hub, which is connected to the rim of the spring by radially extending spokes. In order to measure the dither velocity so that it may be regulated, a pick off transducer is attached to a spoke. An operational amplifier has a first input connected to the pick off transducer. A second input of the operational amplifier and the conductive hub and spoke of the ring laser gyro are connected to ground.

The Ljung patent asserts that the ground connection between the second input of the operational amplifier and the block of the ring laser gyro causes

problems because this ground connection also carries current to power the dither motor. Any current in the ground line causes a voltage drop that results in an unwanted output signal at the output of the operational amplifier. The Ljung patent further asserts that the means of attaching the pick off transducer to the spoke used in the prior art does not have both high conductivity and high strength and that the placement of the pick off transducer along one end portion of the spoke causes high mechanical stress in the transducer and, therefore, some loss in the sensitivity of the transducer after extended use.

The Ljung patent purportedly overcomes these problems by attaching the pick off transducer so that its center point is at a radius where the spoke has a zero bending moment due to a rotation of the rim of the hub, by attaching the pick off transducer to the spoke using an adhesive which has both high conductivity and high strength, and by choosing a ground point for the hub that is without significance and has no function.

Independent claim 1 of the present application is directed to a gas discharge tube comprising a block, a cathode, and an anode. At least a portion of the block is maintained at a reference potential. The cathode

engages the block and is biased at a higher potential than the reference potential. The anode also engages the block and is biased at a higher potential than the cathode.

The Ljung patent discloses no details as to the biasing of the cathode and anode with respect to the block. Accordingly, the Ljung patent does not anticipate independent claim 1.

Because the Ljung patent does not anticipate independent claim 1, the Ljung patent does not anticipate dependent claim 2.

Independent claim 8 of the present application is directed to a gas discharge tube comprising a block, a cathode, and an anode. At least a portion of the block is maintained at a reference potential. The cathode engages the block and is biased at a lower potential than the reference potential. The anode also engages the block and is biased at a higher potential than the reference potential.

The Ljung patent discloses no details as to the biasing of the cathode and anode with respect to the block. Accordingly, the Ljung patent does not anticipate independent claim 8.

Because the Ljung patent does not anticipate independent claim 8, the Ljung patent does not anticipate dependent claim 9.

The vonBieren patent discloses a ring laser formed in gas-filled bores 22 within a frame 10. The laser has four mirrors 12, 14, 16, 18 at the bore junctions. A laser gas is in the bore 22. To energize that gas to create counterpropagating ring laser beams, a voltage is placed between a pair of anodes 17, 19 and a cathode 20. A flex ring 32,34 adjusts for differences in expansion between the ring 34 and the frame 10. The ring 34 is mounted upon a supporting post 38. A positive voltage is supplied to the anodes 17 and 19. The high voltage power supply providing the potential between anodes 17 and cathode 20 is connected with its positive terminal connected to the ground potential. The metallic support ring 34 is also grounded. The metallic flange of the cathode 20 carries a negative voltage.

According to the vonBieren patent, an electric field is created within the frame 10 between the ring 30 and the metallic flanges of the cathode 20, and lithium ion migration takes place along the electric field lines if no measures are taken to intercept the electric field with a blocking space. As shown in Figure 2, slots 26

and 28 are cut in the two faces of the frame 10 between the positive contact surfaces 30A, 30B of the positive flex ring and the flange 20F of the cathode. As shown in Figures 3 and 4, the electric field lines are warped by the slots and by negatively charged electrodes 27 and 29. As shown in Figures 5 and 6, the electric field lines are warped by only the negatively charged electrodes 27 and 29.

Thus, as disclosed in the vonBieren patent, the block is at ground potential, and the power supply is connected between the anodes 17/19 and cathode 20. The positive terminal of the power supply is at ground potential and is connected to the anodes 17/19. Accordingly, the cathode 20 has a negative potential.

According to independent claim 1 of the present application, at least a portion of the block is maintained at a reference potential, the cathode is at a higher potential than the reference potential, and the anode is at a higher potential than the cathode.

The vonBieren patent instead discloses that the block and anode are biased at the same potential and that the cathode is biased at a lower potential than the anode and block. Accordingly, the vonBieren patent does not anticipate independent claim 1.

Because the vonBieren patent does not anticipate independent claim 1, the vonBieren patent does not anticipate dependent claim 2.

According to independent claim 8 of the present application, at least a portion of the block is maintained at a reference potential, the cathode is at a lower potential than the reference potential, and the anode is at a higher potential than the reference potential.

The vonBieren patent instead discloses that the block and anode are biased at the same potential and that the cathode is biased at a lower potential than the anode and block. Accordingly, the vonBieren patent does not anticipate independent claim 8.

Because the vonBieren patent does not anticipate independent claim 8, the vonBieren patent does not anticipate dependent claim 9.

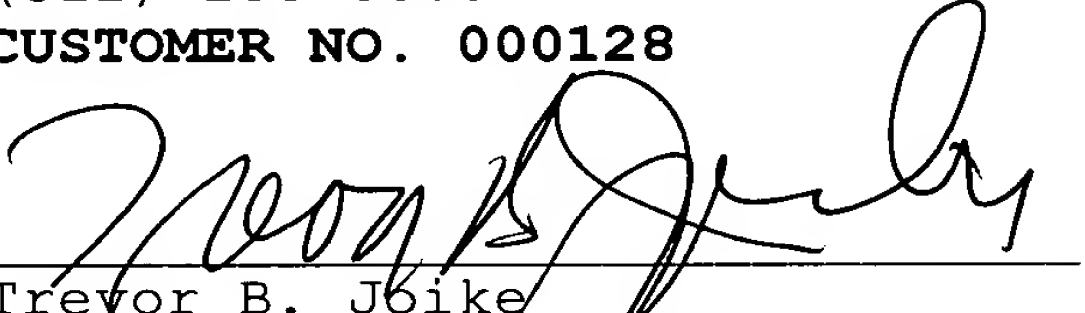
CONCLUSION

In view of the above, the claims of the present application patentably distinguish over the art applied by the Examiner. Accordingly, allowance of these claims and issuance of the present application are respectfully requested.

Respectfully submitted,

SCHIFF HARDIN LLP
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
(312) 258-5000
CUSTOMER NO. 000128

By:


Trevor B. Joike
Registration No.: 25,542
Attorney for Applicants

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